

CLAIMS

1. Process for removing nitric oxides (NO_x) and nitrous oxide (N_2O) from a gas comprising NO_x , N_2O , oxygen and water comprising:

5 - adding an amount of ammonia to said gas such that the amount of ammonia is at a value $0.7 < X < 1.4$, wherein X is the voluminal ratio of ammonia/nitrogen oxides;

 -causing said gas to circulate at temperatures ranging between 200 and 600 °C, on a catalyst comprising a iron beta-zeolite .

2. Process according to claim 1, wherein said gas comprises between 100 and 7000 ppmv of NO_x and N_2O .

3. Process according to claim 1, wherein said iron beta-zeolite comprises an iron beta-zeolite granule and an agglomeration binder.

4. Process according to claim 1 in which the iron beta-zeolite is a beta zeolite of Si/Al molar ratio ranging between 8 and 100, charged with iron by impregnation or exchange, in which the content by weight of iron ranges between 0.02 and 8%.

5. Process according to claim 4, wherein the Si/Al molar ratio ranges between 8 and 20.

6. Process according to claim 4, wherein the content by weight of iron ranges
20 between 0.5-3%.

7. Process according to claim 1, in which said gas circulates over the iron beta catalyst at voluminal velocities per hour (VVH) from 1000 to 50 000 h^{-1} .

8. Process according to claim 1, wherein the volume content of oxygen ranges between 1.5 and 5% and the volume content of water between 0.5 and 5%.

9. Process according to claim 1, in which the gas is a tail gas from a nitric acid production factory.